

REMARKS

The Examiner made certain objections to the specification. The specification has been amended as suggested by the Examiner. The Examiner also made several informalities objections to the claims. The claims have been amended as suggested by the Examiner.

Claims 1-23 were rejected under 35 U.S.C. 112, first paragraph. Applicants respectfully traverse this rejection.

The Examiner states that

“the specification does not reasonably provide enablement for an ink jet ink comprising at least one first metal complex black dye that when printed alone has a the specific CIELAB a* value and visual density as claimed; at least one second metal complex dye that when printed alone has a the specific CIELAB a* value and visual density as claimed and at least one yellow azo-aniline yellow dye or metal complex yellow dye or mixtures thereof. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims.”

The Examiner further states that

“The claims recite at least one first metal complex black dye that when printed alone has a specific CIELAB a* value and visual density as claimed and at least one second metal complex dye that when printed alone has a specific CIELAB a* value and visual density as claimed. This encompasses any metal complex black dye that has those properties. However, the specification only teaches the use of one first metal complex black dye and two second metal complex black dyes. Such a limited disclosure does not support the breadth of the instant claims.”

It is an object of this invention to provide a black ink for ink jet printing capable of producing images with near neutral tone over a range of densities while providing high light fastness when printed on a variety of recording elements that are subsequently laminated. Another object of this invention is to provide a black ink of a color ink jet ink set with near neutral tone over a range of densities while providing high light fastness when printed on a variety of recording elements that are subsequently laminated.

Please see the accompanying declaration of James Blease with regard to the following discussion. Applicants wish to submit that they have enabled the invention in that they have supplied the CIELAB a* value and the

Status A density of the black dyes. Methods of determining these values are well known in the art and a specific example of how to perform the measurement is described at page 16, line 19 of the specification. Further, the invention requires that the dyes be metal complex dyes. Applicants provided two classes of the first black dye, either Reactive Black or Pacified Reactive Black 31, which are disazo copper complex dyes; or C.I. Acid Black 52 which is a monoazo chromium complex dye (an example of the dye discussed at page 7, line 2). These dyes are structurally quite different. For the second dye, as noted by the Examiner, Applicants have provided two different classes of dyes, a metal complex of a bisazo black dye and a metal complex of a trisazo black dye. Applicants have also provided that the yellow dye is an azoaniline yellow dye or a metal complex yellow dye and have provided several examples thereof. These are classes of water fast yellow dyes.

The CIELAB value and density status parameters provide the information required to choose black dyes which meet the object of having a neutral tone over a range of densities when printed on a receiving element; while a metal complex dye will meet the light fastness requirement. With regard to the yellow dye, the dyes required by the invention are classes having comparable light fastness to the black dyes. The dyes must have similar light fastness so that the color balance will not change over time. Any yellow dye will provide the appropriate color correction to the black ink, but only certain classes of dyes provide the appropriate light fastness.

Applicants submit that any two black dyes that meet the requirements of the claims in combination with any yellow dye that meets the requirements of the claims will work in the invention and that, therefore the specification supports the breadth of the claims. Applicants further submit that one skilled in the art, given the information in the application, will be able to prepare the ink of the invention without undue experimentation, and that therefore the claims are enabled as written.

Claims 4 and 18 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicants respectfully traverse this rejection.

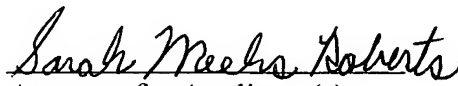
Claim 4 is considered vague and indefinite since there is no definition for the substituent R₃ for formula (IV). Applicants have inserted the definition of R₃ into claim 4. Support for this amendment is found in U.S. Patent 6,302,949 which is incorporated by reference at page 8, line 13 of the specification. Please note that in Applicants' description of the structure, the numbering of the R groups has been incremented by 1.

Claim 18 has been amended to remove the trade names "Kodak Lightfast Magenta 1", "Ilford Magenta 377", and "Nippon Kayaku JPD EK-1 ". The CAS#s have been left in the claims as these are specific compound structures as cataloged by the Chemical Abstract Services, arm of the American Chemical Society. Grant & Hack's Chemical Dictionary, Fifth Edition defines a CAS registry number as a unique number given to each definable chemical., and therefore such numbers are not indefinite.

Claims 1-19, 22 and 23 were rejected under 35 U.S.C. 103(a) as being unpatentable over WO 02/094943 (US 2004/0128775 is English equivalent). Applicants respectfully traverse this rejection. In the dye combination of the '943 Application dye (4) is not a black dye, rather it is a magenta dye. At paragraph [0049] of page 5 it is stated that one of dyes falling within formula (4) is C.I. Reactive Red 23. As the '493 Application does not suggest nor disclose the combination of two black metal complex dyes as required in the current invention, the current invention cannot be obvious over the '493 reference.

In light of the above amendments and remarks it is respectfully requested that the amended claims be allowed.

Respectfully submitted,


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If the Examiner is unable to reach the Applicant(s) Attorney at the telephone number provided, the Examiner is requested to communicate with Eastman Kodak Company Patent Operations at (585) 477-4656.